LISTING OF THE CLAIMS

The following listing of claims will replace all prior versions and listings:

1. (Currently Amended) A method for controlling a system ~~formed from~~ <u>comprising</u> a plurality of interdependent units to achieve [[an]] <u>a target</u> outcome, <u>the method</u> comprising the steps of<u>:</u>

automatically establishing ~~a desired~~ <u>the target</u> outcome for the system<u>;</u> ~~and~~<u>;</u>

automatically establishing a ~~desired~~ <u>target</u> action for each <u>interdependent</u> unit <u>of the plurality of interdependent units</u> responsive to the <u>target</u> outcome<u>; and</u> ~~but independently of the desired action of the other units~~

automatically actuating each <u>interdependent unit of the plurality of interdependent units to perform the target action for the respective interdependent unit of the plurality of interdependent units,</u>

<u>wherein in the automatic establishing of the target action for each interdependent unit, the target action is established independently of, and without reference to, the target action for any other interdependent unit of the plurality of interdependent units.</u>

2. (Currently Amended) [[A]] <u>The</u> method in accordance with Claim 1, wherein the ~~desired~~ <u>target</u> action for ~~a said~~ <u>each interdependent</u> unit is <u>automatically</u> established in response to [[the]] <u>a</u> current position of at least one reference portion of the system relative to a ~~desired~~ <u>target</u> position of ~~that~~ <u>the at least one</u> reference portion.

3. (Currently Amended) A method for controlling a system ~~formed from~~ <u>comprising</u> a plurality of interdependent units to achieve [[an]] <u>a target</u> outcome, <u>the method</u> comprising the steps of<u>:</u>

automatically establishing ~~a desired~~ <u>the target</u> outcome for the system, ~~and~~

automatically establishing a ~~desired~~ <u>target</u> action for each <u>interdependent</u> unit <u>of the plurality of interdependent units</u> responsive to the <u>target</u> outcome,

wherein the ~~desired~~ <u>target</u> action for ~~a said~~ <u>an interdependent</u> unit <u>of the plurality of interdependent units</u> is <u>automatically</u> established in response to [[the]] <u>a</u> current position of at

least one reference portion of the system relative to a ~~desired~~ <u>target</u> position of ~~that~~ <u>the at least</u> <u>one</u> reference portion<u>,</u>

      <u>automatically actuating each interdependent unit of the plurality of interdependent units</u> <u>to perform the target action for the respective interdependent unit of the plurality of</u> <u>interdependent units,</u>

      <u>wherein in the automatic establishing of the target action for each interdependent unit, the</u> <u>target action is established independently of, and without reference to, the automatic establishing</u> <u>of the target action for any other interdependent unit.</u>

      4. (Currently Amended) [[A]] <u>The</u> method in accordance with Claim 2, wherein the ~~desired~~ <u>automatic establishing of the target</u> action for ~~a said~~ <u>each interdependent</u> unit ~~involves~~ <u>includes</u> calculating a difference value between the current position of [[a]] said <u>at least one</u> reference portion and the ~~desired~~ <u>target</u> position of ~~that~~ <u>the at least one</u> reference portion, and using said difference value to establish said ~~desired~~ <u>target</u> action.

      5. (Currently Amended) [[A]] <u>The</u> method in accordance with Claim 4, further comprising<u>:</u> ~~the steps of~~

      <u>automatically</u> establishing an operation action for each <u>interdependent</u> unit[[;]] ~~and~~<u>,</u>

      <u>wherein the automatic actuating of each interdependent unit includes</u> instructing each interdependent unit to initiate ~~its~~ <u>the</u> operation action.

      6. (Currently Amended) [[A]] <u>The</u> method in accordance with Claim 5, further comprising ~~the step of~~ <u>repeatedly</u> iterating <u>through</u> the ~~method~~ steps <u>of the method</u> ~~to update the~~ <u>so as to automatically establish an updated</u> operation action.

      7. (Currently Amended) [[A]] <u>The</u> method in accordance with Claim 6, wherein ~~the~~ <u>a</u> rate of <u>the</u> iteration is constant throughout the system.

      8. (Currently Amended) [[A]] <u>The</u> method in accordance with Claim 6, wherein ~~the~~ <u>a</u> rate of <u>the</u> iteration varies ~~between~~ <u>among the interdependent</u> units of the system.

9. (Currently Amended) [[A]] The method in accordance Claim 5, wherein the operation action for at least some of the ~~interdependent~~ units of the plurality of interdependent units is the ~~desired~~ target action.

10. (Currently Amended) [[A]] The method in accordance with Claim 5, further comprising ~~the steps of~~ automatically establishing ~~a~~ constraint ~~factors~~ factor for the system, and automatically establishing a constrained action for ~~at least one~~ a constrained interdependent unit of the plurality of interdependent units responsive to the constraint ~~factors~~ factor,
   wherein the constraint factor limits a range of target actions available to the constrained interdependent unit of the plurality of interdependent units.

11. (Currently Amended) [[A]] The method according to Claim 10, wherein the operation action for [[a]] the constrained interdependent unit ~~for which a constrained action has been established~~ is the constrained action.

12. (Currently Amended) [[A]] The method in accordance with Claim 10, wherein only the constraint ~~factors~~ factor for [[a]] the constrained interdependent unit ~~are~~ is utilised in the automatic establishing of the constrained action for ~~that~~ the constrained interdependent unit.

13. (Currently Amended) [[A]] The method in accordance with Claim 10, wherein the constraint ~~factors~~ factor relating to ~~at least one~~ the constrained interdependent unit ~~are~~ is utilised in establishing [[a]] said constrained action for ~~another~~ said interdependent unit of the plurality of interdependent units.

14. (Currently Amended) [[A]] The method in accordance with Claim 10, further comprising ~~the step~~ automatically establishing a plurality of intermediate outcomes to achieve the ~~desired~~ target outcome.

15. (Currently Amended) [[A]] The method in accordance with Claim 14, wherein the ~~desired actions~~ target action of ~~the~~ each interdependent ~~units are~~ unit is automatically established in response to ~~individual ones~~ an intermediate outcome of the ~~plurality of~~ intermediate outcomes.

16. (Currently Amended) [[A]] The method in accordance with Claim [[14]] 15, wherein the system comprises a series of subsystems, each subsystem being comprised of at least one interdependent unit of the plurality of interdependent units, and the method further comprises:

~~the steps of~~ automatically establishing ~~a said~~ the intermediate outcome for each subsystem, whereby the ~~desired~~ target action for each interdependent unit is established responsive to the intermediate outcome of the subsystem [[to]] with which it is associated.

17. (Currently Amended) [[A]] The method in accordance with Claim 14, ~~wherein the method steps are iterative so that a plurality of the desired actions for each unit is established over time, and whereby the desired~~ further comprising repeatedly iterating through the steps of the method to automatically establish over time a plurality of target actions for each interdependent unit, wherein the plurality of target actions ~~are~~ is established responsive to [[a]] the plurality of the intermediate outcomes.

18. (Currently Amended) [[A]] The method in accordance with Claim 1, wherein the target outcome is ~~dependent on~~ automatically established in accordance with a spatial relationship of the system.

19. (Currently Amended) [[A]] The method in accordance with Claim 18, wherein the target outcome is automatically established in accordance with a predetermined spatial relationship of the system relative to a ~~desired~~ target location.

20. (Currently Amended) [[A]] The method in accordance with Claim 18, wherein the target outcome is ~~also~~ automatically established in accordance with a time ~~dependent~~ consideration.

21. (Currently Amended) [[A]] The method in accordance with Claim 18, wherein the ~~desired~~ target action ~~involves~~ is automatically established in accordance with an adjusting ~~of the~~ a spatial position of that interdependent unit.

22. (Currently Amended) [[A]] The method in accordance with Claim 21, wherein the adjustment is by way of movement of the interdependent unit and/or expansion or contraction of that interdependent unit.

23. (Currently Amended) [[A]] The method in accordance with Claim 18, wherein the target outcome determines the ~~desired~~ target position.

24. (Currently Amended) A method for controlling a plurality of interdependent units, the method comprising the steps of[[,]]:

automatically deriving an operation action responsive to starting information for each interdependent unit[[,]] ~~independently deriving an operation action, the operation action being responsive to starting information~~ of the plurality of interdependent units; and

automatically actuating each interdependent unit of the plurality of interdependent units to perform the operation action for the respective interdependent unit of the plurality of interdependent units,

wherein in the automatically deriving of the operation action for each interdependent unit, the operation action is established independently of, and without reference to, the operation action for any other interdependent unit of the plurality of interdependent units,

wherein the starting information is selected from a group comprising a target outcome, a target action, a constraint action and a reference position.

25. (Canceled)

26. (Currently Amended) A system ~~for controlling a plurality of interdependent units moveable to achieve an outcome, the system~~ comprising a controller ~~arranged~~ operable to

implement ~~a control methodology~~ the method in accordance with Claim 1 and thereby to control the plurality of interdependent units.

27. (Currently Amended) [[A]] The system including the controller in accordance with Claim [[24]] 26, ~~wherein the~~ further comprising a sensor operable to collect information regarding ~~the~~ a presence of a constraining ~~factors~~ factor ~~is collected by a sensor~~ for determining a constraint action for at least a constrained interdependent unit of the plurality of interdependent units.

28. (Currently Amended) [[A]] The system in accordance with Claim [[25]] 26, ~~wherein the movement is performed by an actuating means~~ further comprising an actuating system operable to actuate the plurality of interdependent units.

29. (Currently Amended) A system operable to implement the method in accordance with Claim 24, wherein each interdependent unit of the plurality of interdependent units is a constituent part of a robot.

30. (Currently Amended) [[A]] The system in accordance with Claim ~~27~~ 29, wherein each constituent part is a module in the robot implemented as a robotic manipulator.

31. (Currently Amended) A system operable to implement the method in accordance with Claim 24, further comprising control means ~~capable of switching the~~ operable to switch a control methodology of the system to a centralised control methodology in which all interdependent units of the plurality of interdependent units are centrally controlled.

32. (Currently Amended) A ~~computer program arranged to, when loaded on a computing system[[,]]~~ processor-readable medium comprising a program of instructions executable on a computer, the instructions operable to perform the method of Claim 1.

33. (Canceled)

34. (Currently Amended) A ~~computer program arranged to, when loaded on a computing system[[,]]~~ processor-readable medium comprising a program of instructions executable on a computer, the instructions operable to perform the method of Claim 3.

35. (Canceled)

36. (Currently Amended) A system comprising a control system operable to implement the method of Claim 1, and comprising:

the plurality of interdependent units, the units being interdependent and ~~being capable of movement~~ operable to move relative to one another~~[[,]]~~;

at least one actuator ~~operative~~ operable to move the interdependent units~~[[,]]~~; and

~~[[a]]~~ the control system ~~operative~~ being operable to impart instructions to the at least one actuator ~~to move~~ for the automatic actuating of the interdependent units~~[[,]] wherein the controller uses a control methodology in accordance Claim 1.~~

37. (Currently Amended) ~~[[A]]~~ The system in accordance with Claim 36, wherein the units of the plurality of interdependent units are interdependent by being in a predetermined spatial relationship.

38. (Currently Amended) ~~[[A]]~~ The system in accordance with Claim 37, wherein each unit of the plurality of interdependent units ~~are~~ is physically interconnected to at least one other unit of the plurality of interdependent units.

39. (Currently Amended) ~~[[A]]~~ The system in accordance with Claim 36, wherein the control system comprises a plurality of controllers, ~~located~~ each controller of the plurality of controllers positioned in a respective ~~ones~~ unit of the plurality of interdependent units, each controller ~~being operative~~ operable to impart instructions to the at least one actuator ~~to move the~~ for the automatic actuating of the interdependent unit ~~to which it is associated, wherein the controllers use a control methodology in accordance with Claim 1.~~

40. (Currently Amended) [[A]] The system in accordance with Claim 36, wherein each interdependent unit of the plurality of interdependent units is a constituent part of a robot.

41. (Currently Amended) [[A]] The system in accordance with Claim 40, wherein each constituent part is a module in the robot implemented as a robotic manipulator.

42. (Currently Amended) A composite system comprising a plurality of subsystems, each subsystem of the plurality of subsystems comprising ~~a plurality of units, the units being~~ ~~interdependent and being capable of movement relative to one another; at least one actuator~~ ~~operative to move the units in each subsystem; and a control system operative to impart~~ ~~instructions to the at least one actuator using a control methodology in accordance with Claim 1~~ the system according to Claim 36.

43. (Currently Amended) [[A]] The composite system according to Claim 42, wherein to achieve a ~~desired~~ target outcome, intermediate outcomes are automatically established for each subsystem of the plurality of subsystems, and wherein the control system coordinates movement of the plurality of subsystems by coordinating the intermediate outcomes for each subsystem.

44. (Currently Amended) [[A]] The method in accordance with Claim 3, wherein the ~~desired~~ automatic establishing of the target action for ~~a said~~ the interdependent unit involves calculating a difference value between the current position of a reference portion of said at least one reference portion and the ~~desired~~ target position of ~~that~~ the reference portion, and using said difference value ~~to establish~~ for the automatic establishing of said ~~desired~~ target action.

45. (New) The method according to Claim 1, wherein each unit of the plurality of independent units is physically joined together directly or indirectly with at least one other unit of the plurality of interdependent units.